

FIGURE 1

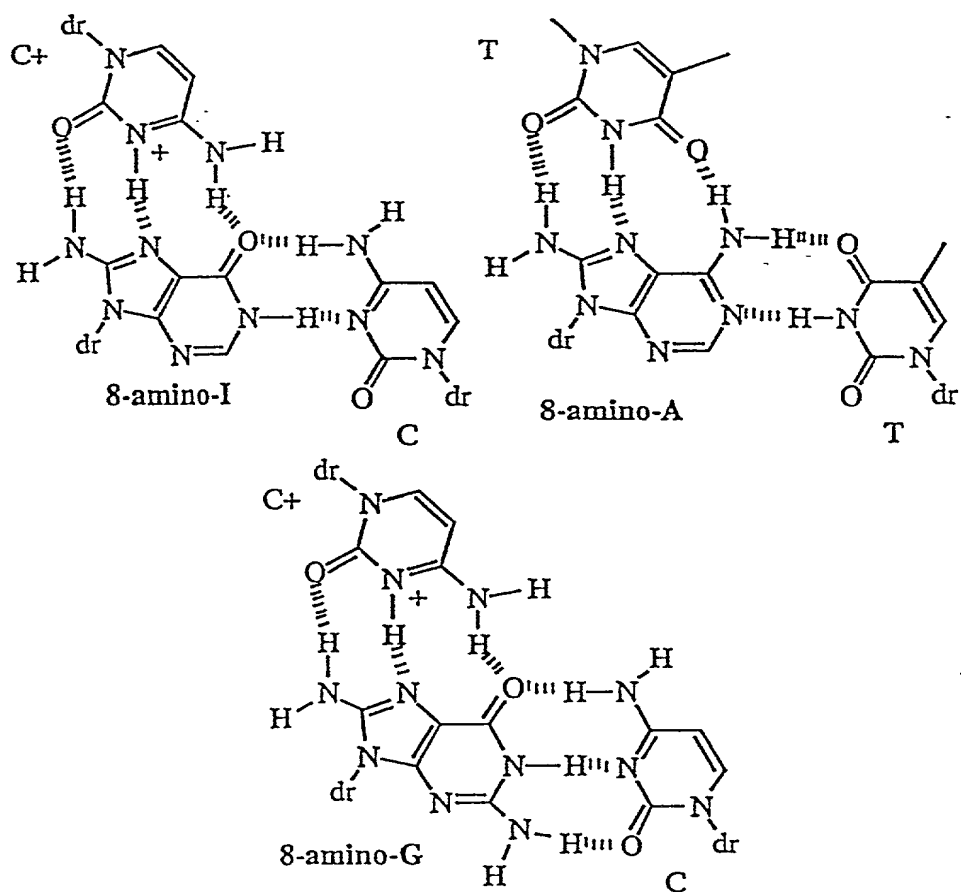
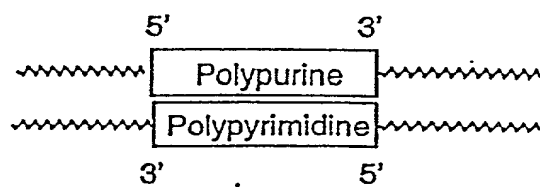
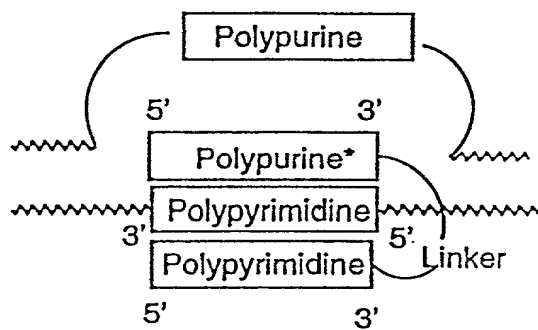


FIGURE 2

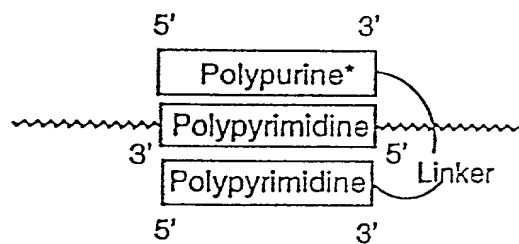
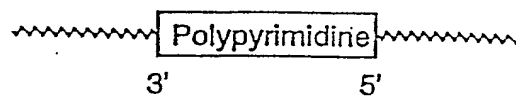
a) Double-stranded target



target strands



b) Single-stranded target



5' 3' 3' 5'  
Polypurine\* Linker Polypyrimidine  
purine W-C strand carrying 8-aminopurines Hoogsteen strand

FIGURE 3

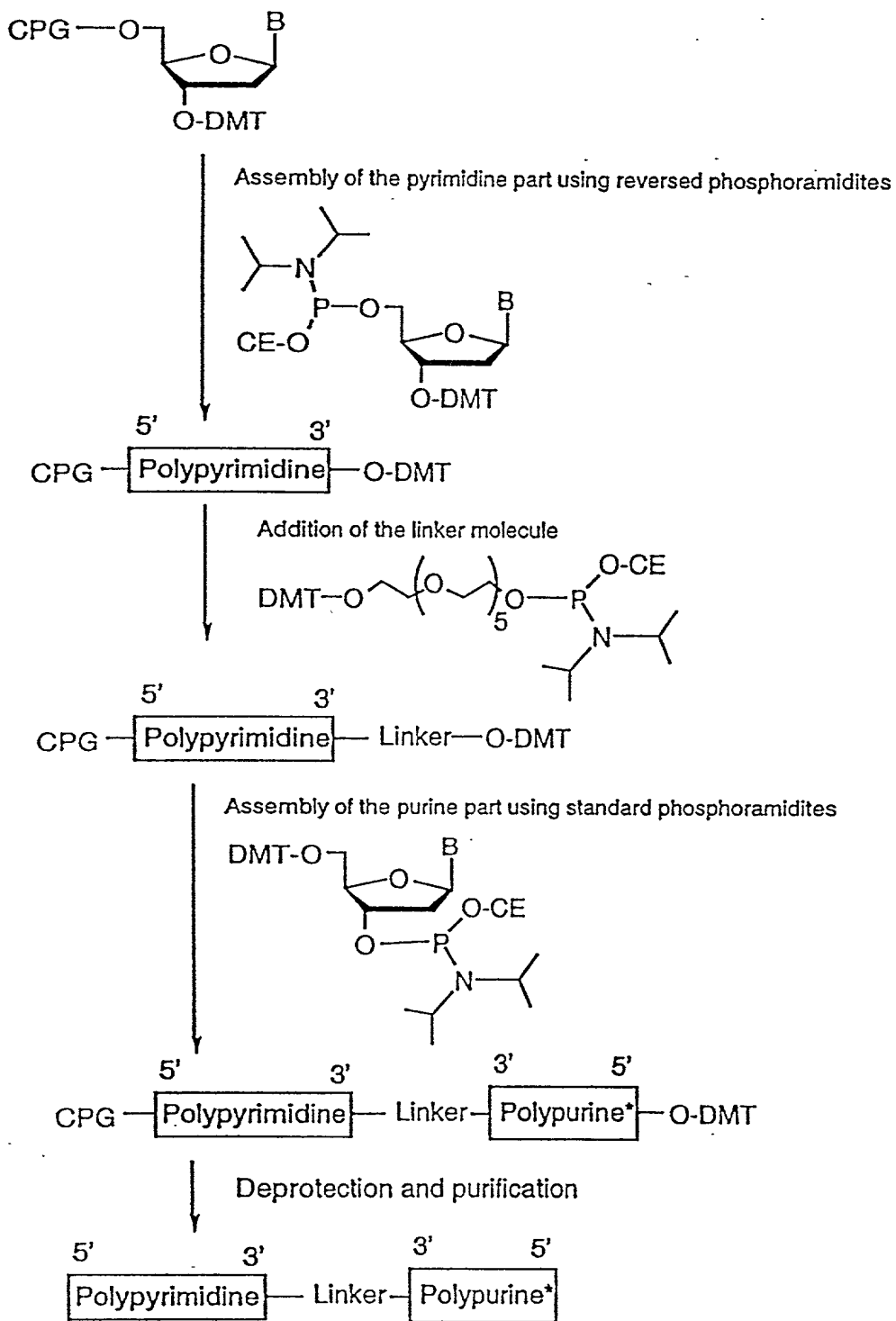


FIGURE 4

5' ← 3'

Template strand (s11- WC)  
(Watson-Crick)

— TCT CCG CCT TC —

3' → 5'

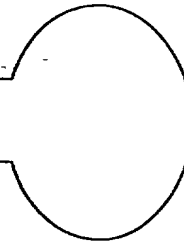
Purine strand  
(Watson-Crick)

— AGA\* GGA\* GGA AG —

Pyrimidine strand  
(Hoogsteen)

— TCT CCG CCT TC —

3' → 5'



loop

B - 22 A

FIGURE 5

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5' ← 3'

Template strand (s11- WC)  
(Watson-Crick)

TCT CCT CCT TC

3' → 5'

Purine strand  
(Watson-Crick)

AGA\* GGA\* GGA AG

Pyrimidine strand  
(Hoogsteen)

3' → 5'

CCC CCC TTT TT

*B-22A control*

loop

5' ← 3'

Template strand (s11- WC)  
(Watson-Crick)

TCT CCT CCT TC

3' → 5'

Purine strand  
(Watson-Crick)

AGA\* GGA\* GGA AG

Pyrimidine strand  
(Hoogsteen)

3' → 5'

TCT CCT CCT TC

*B-22 A*

loop

FIGURE 6

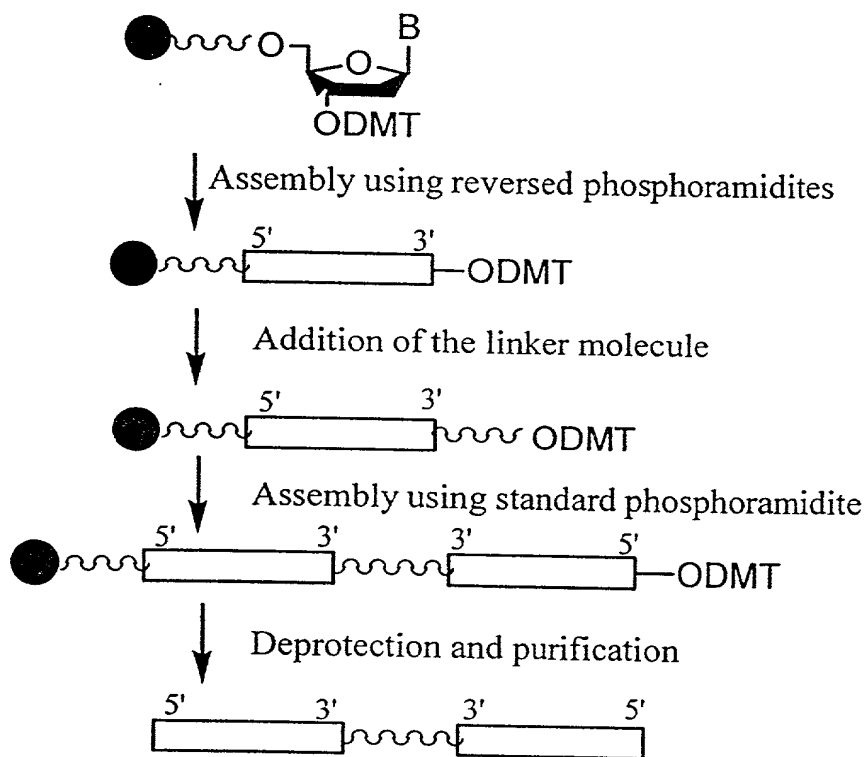


Figure 7A

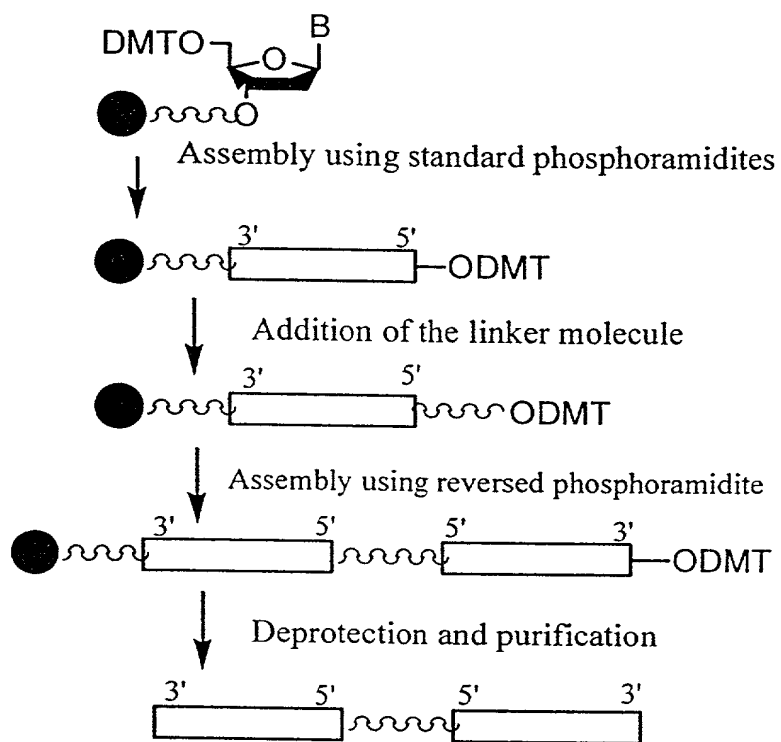


Figure 7B



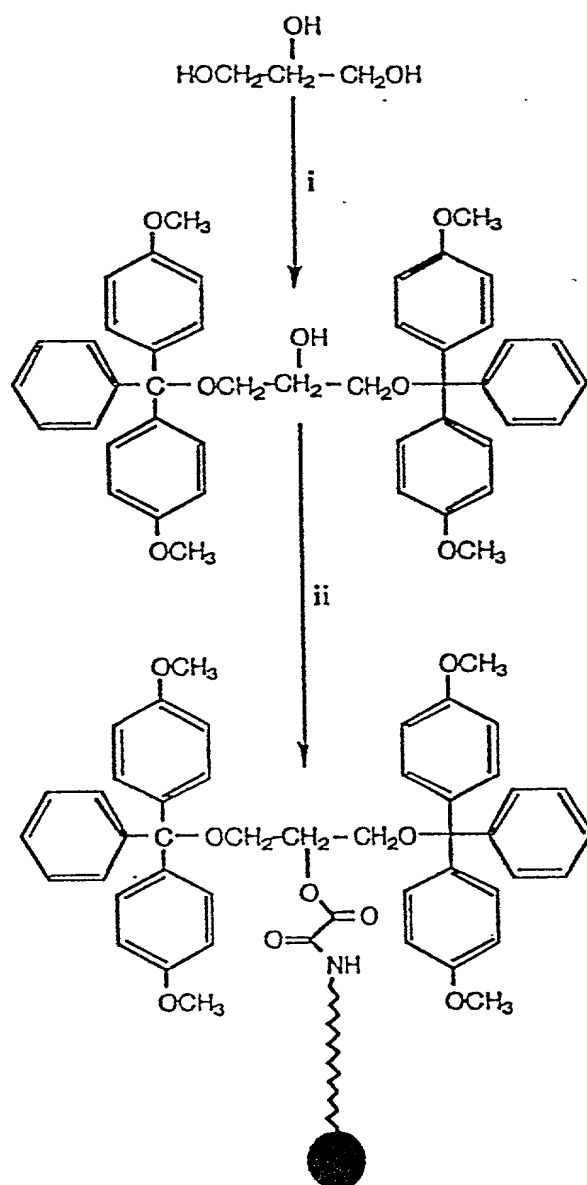


Figure 8

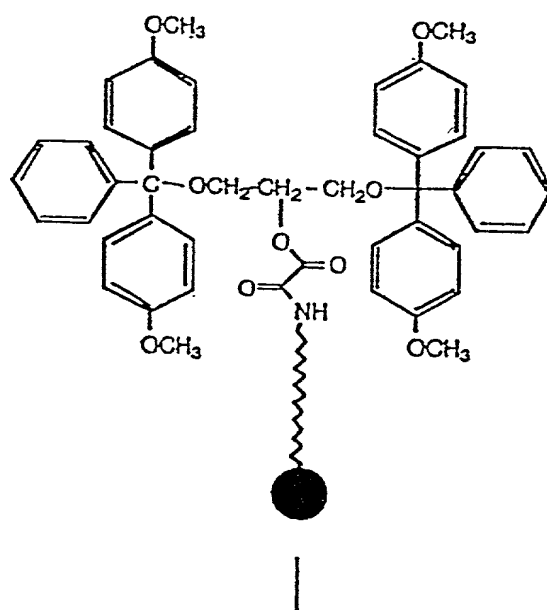


FIGURE 9A

202210.26.5501

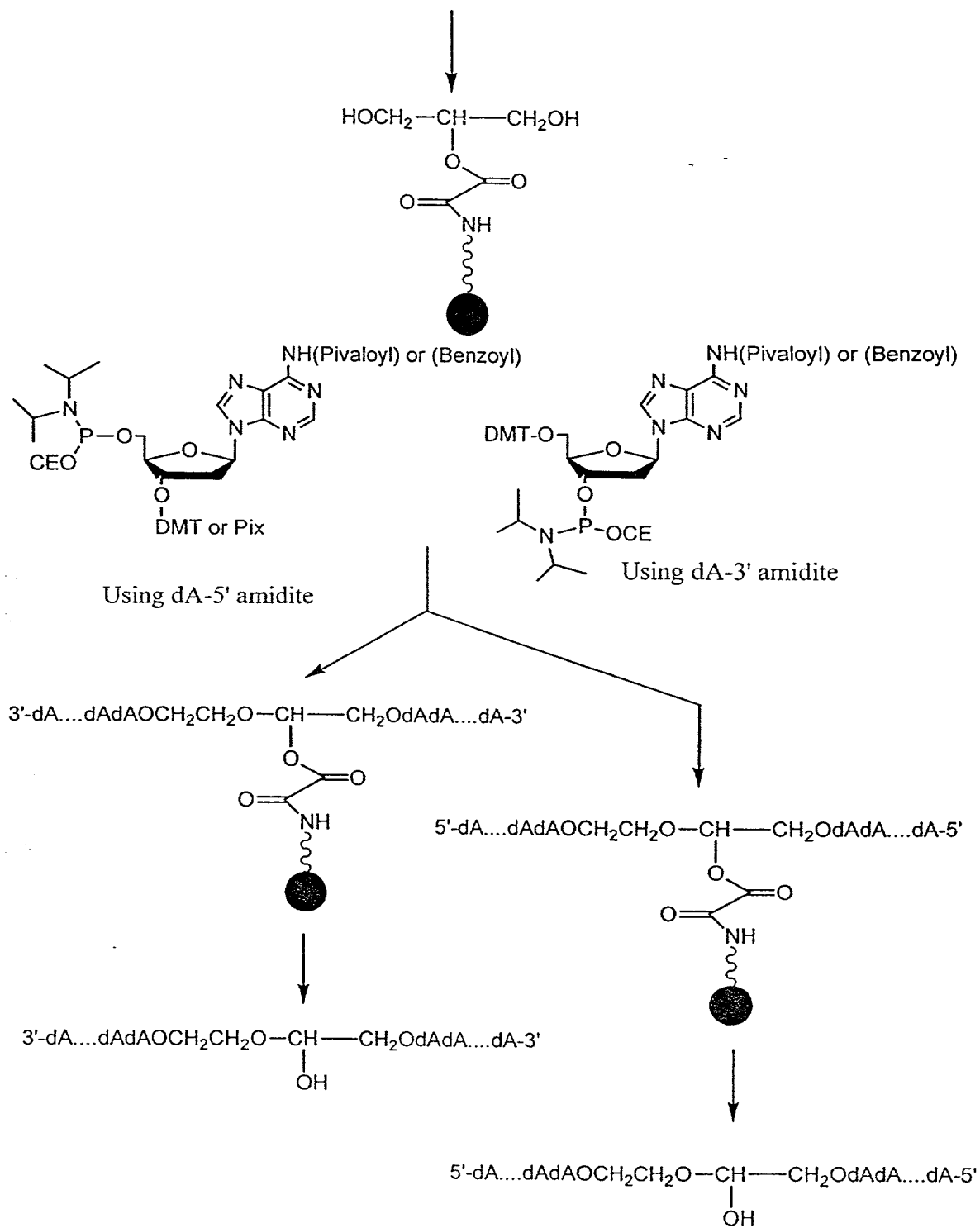


Figure 9B

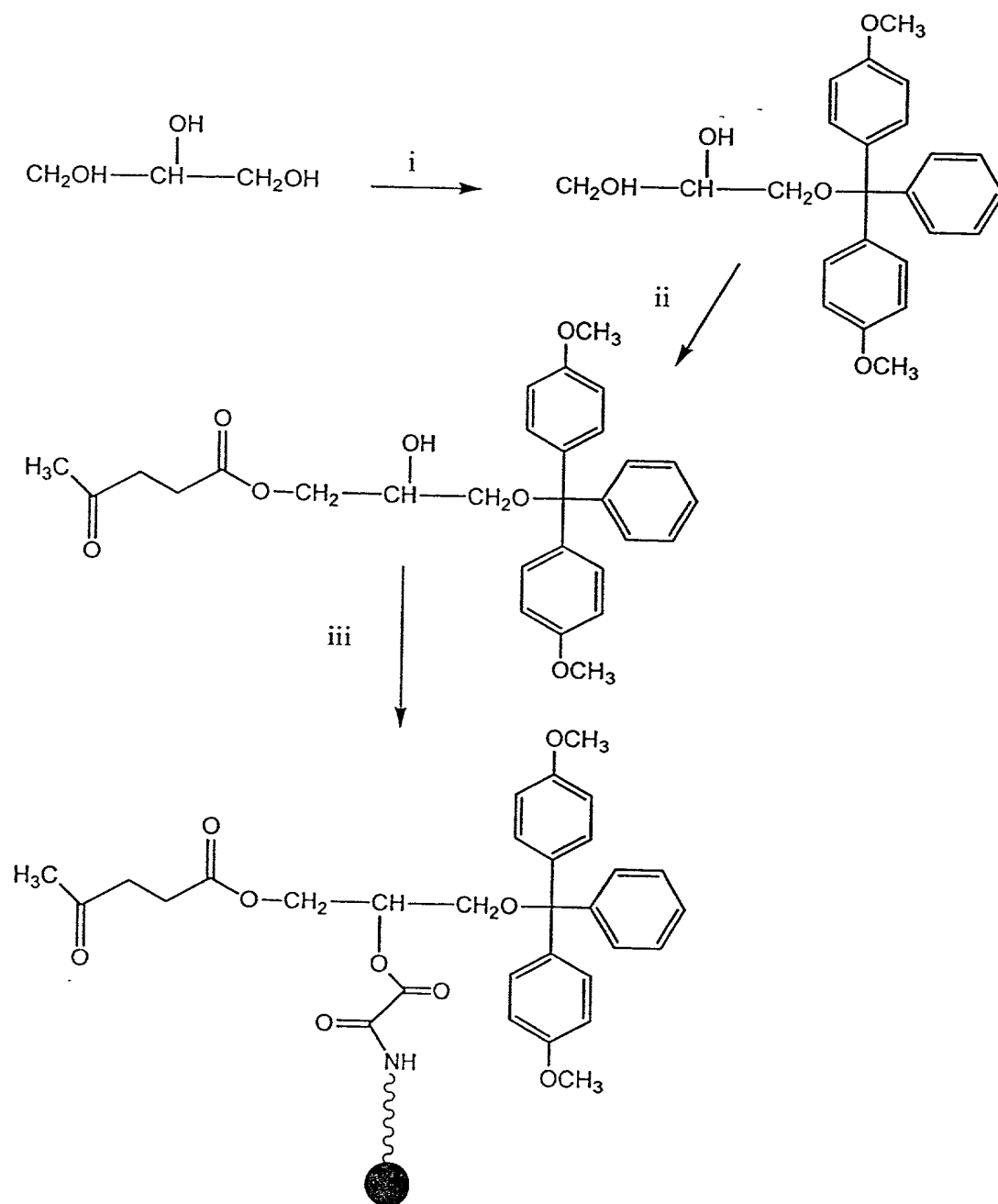


Figure 10

$$F_{A_{\text{max}}} = 1.0$$

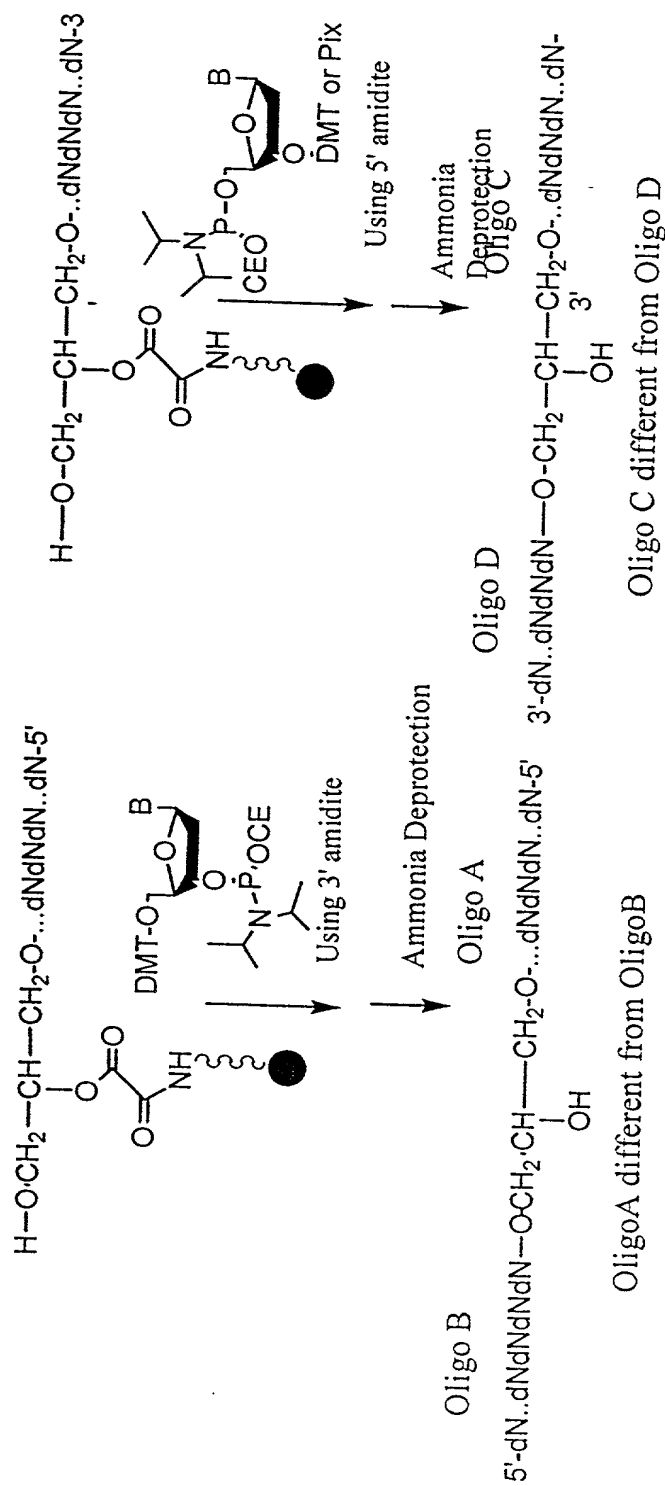


Figure 11B



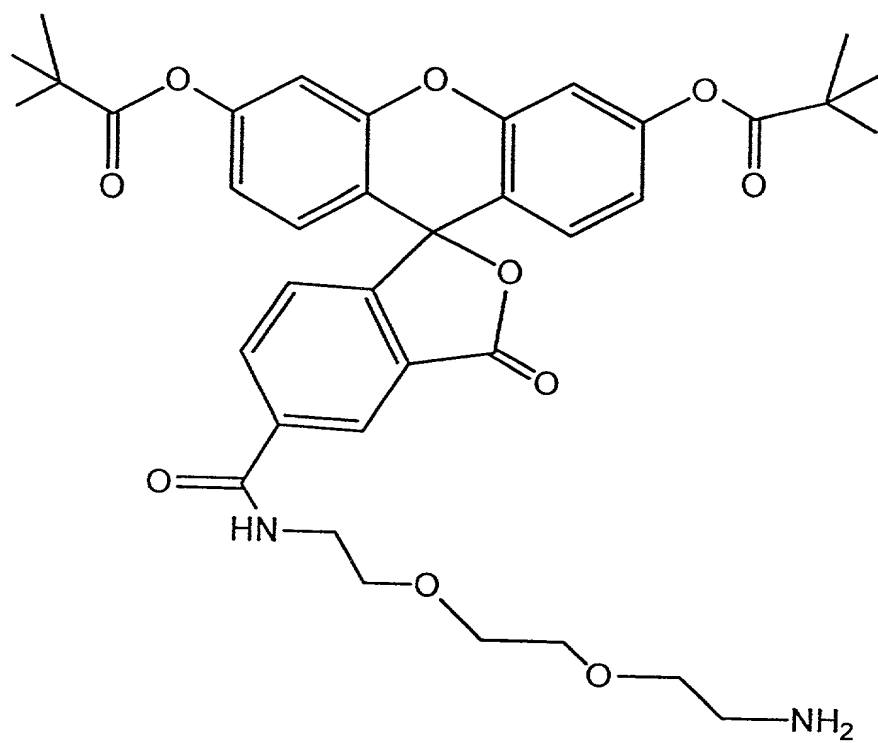


Figure 13



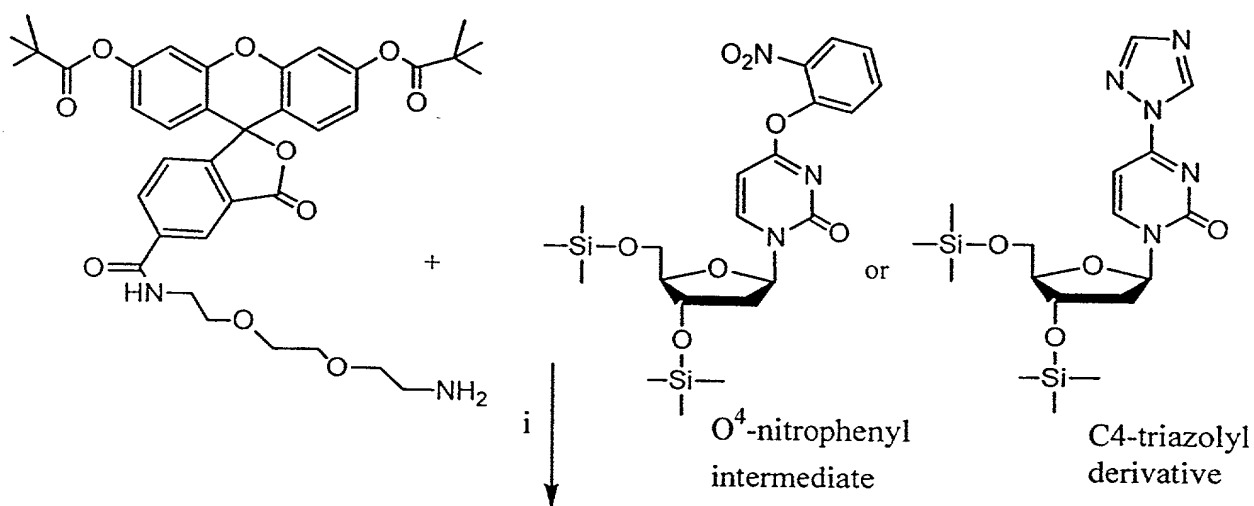


Figure 14A

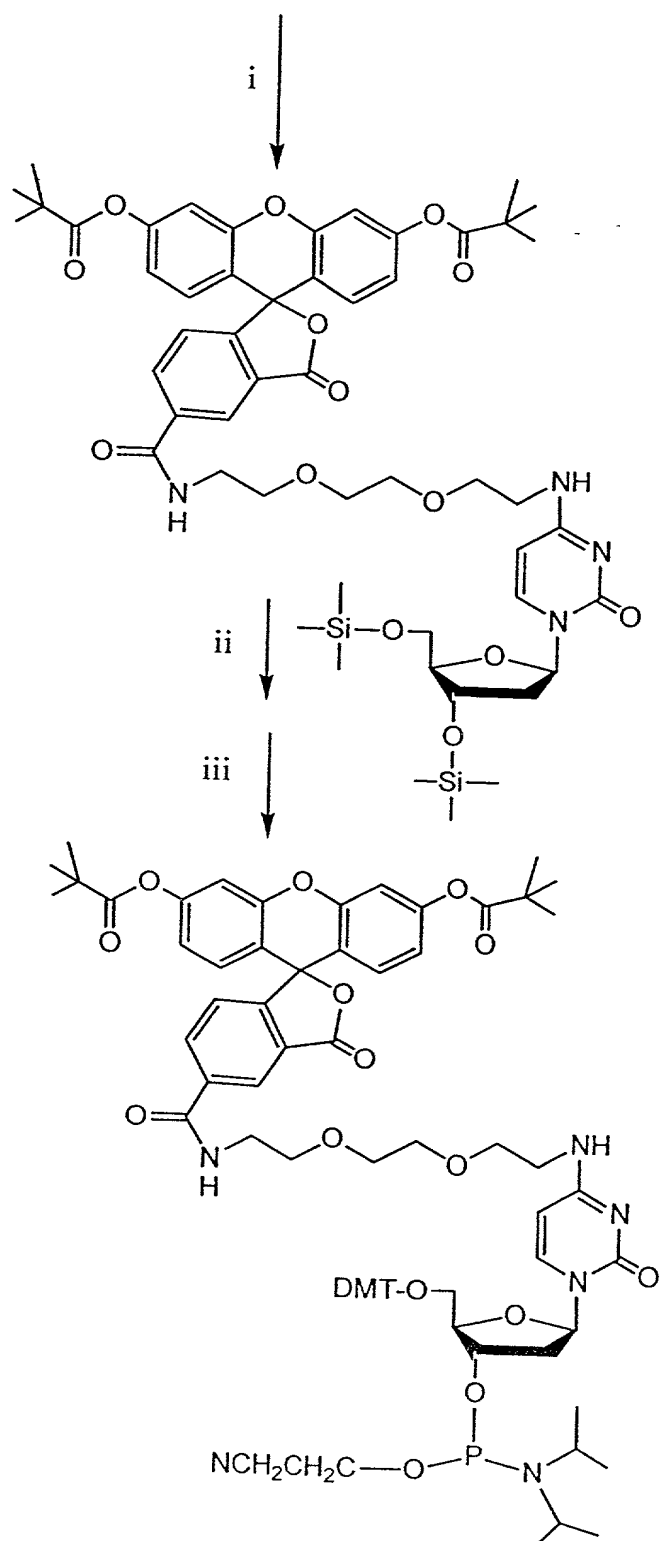


Figure 14B

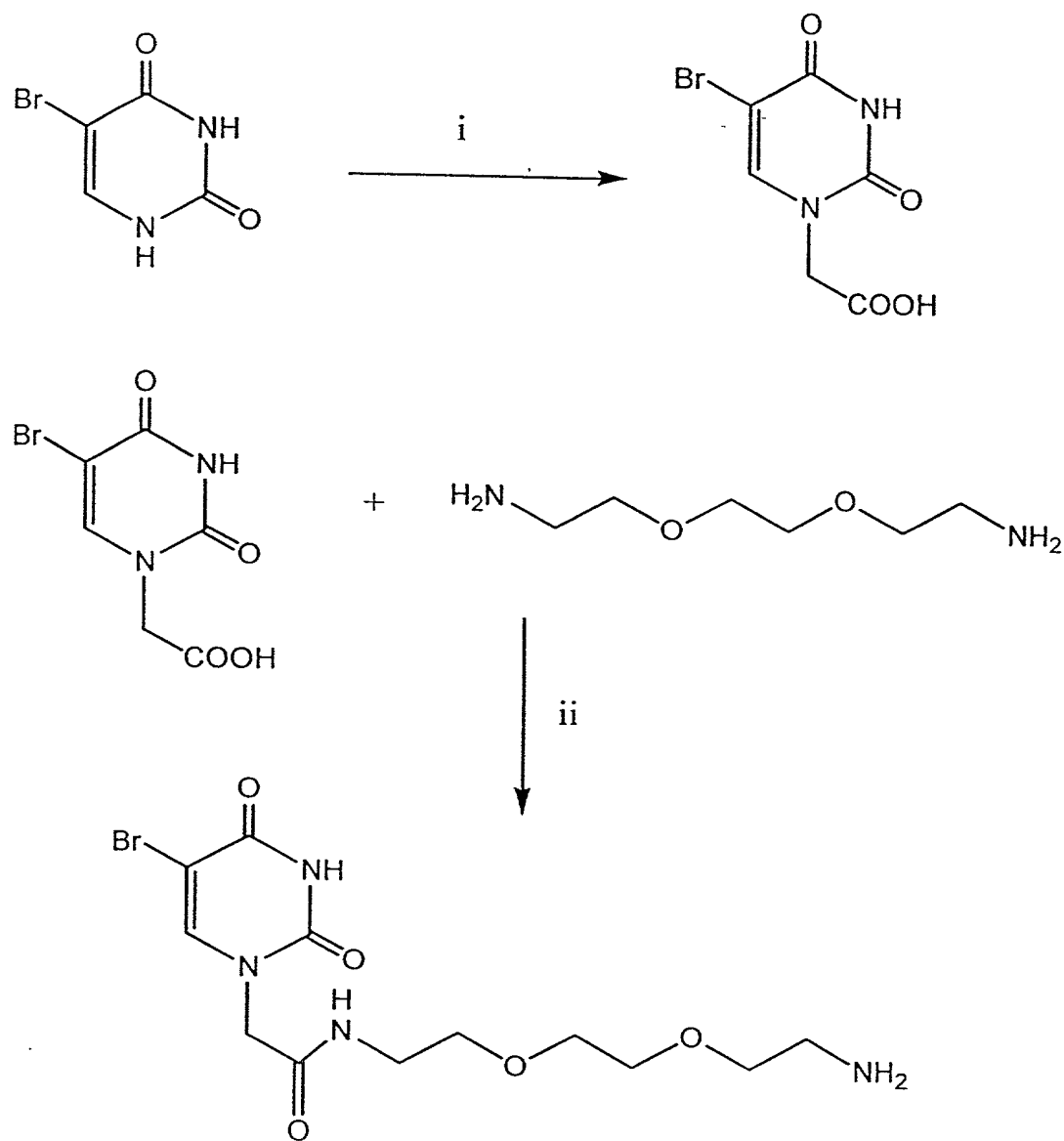


Figure 15

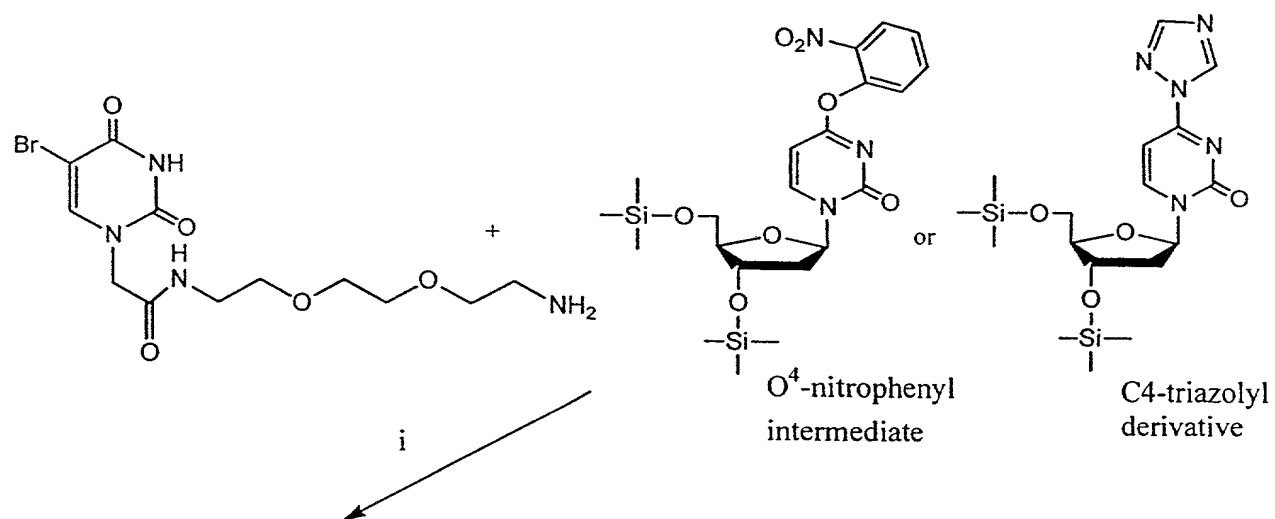


Figure 16A

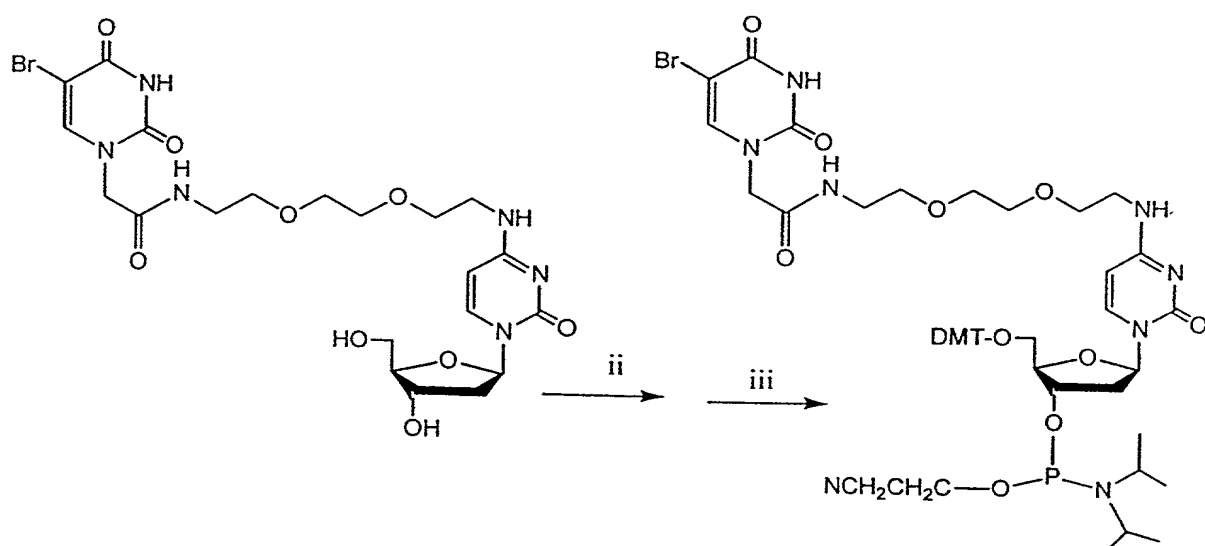


Figure 16B

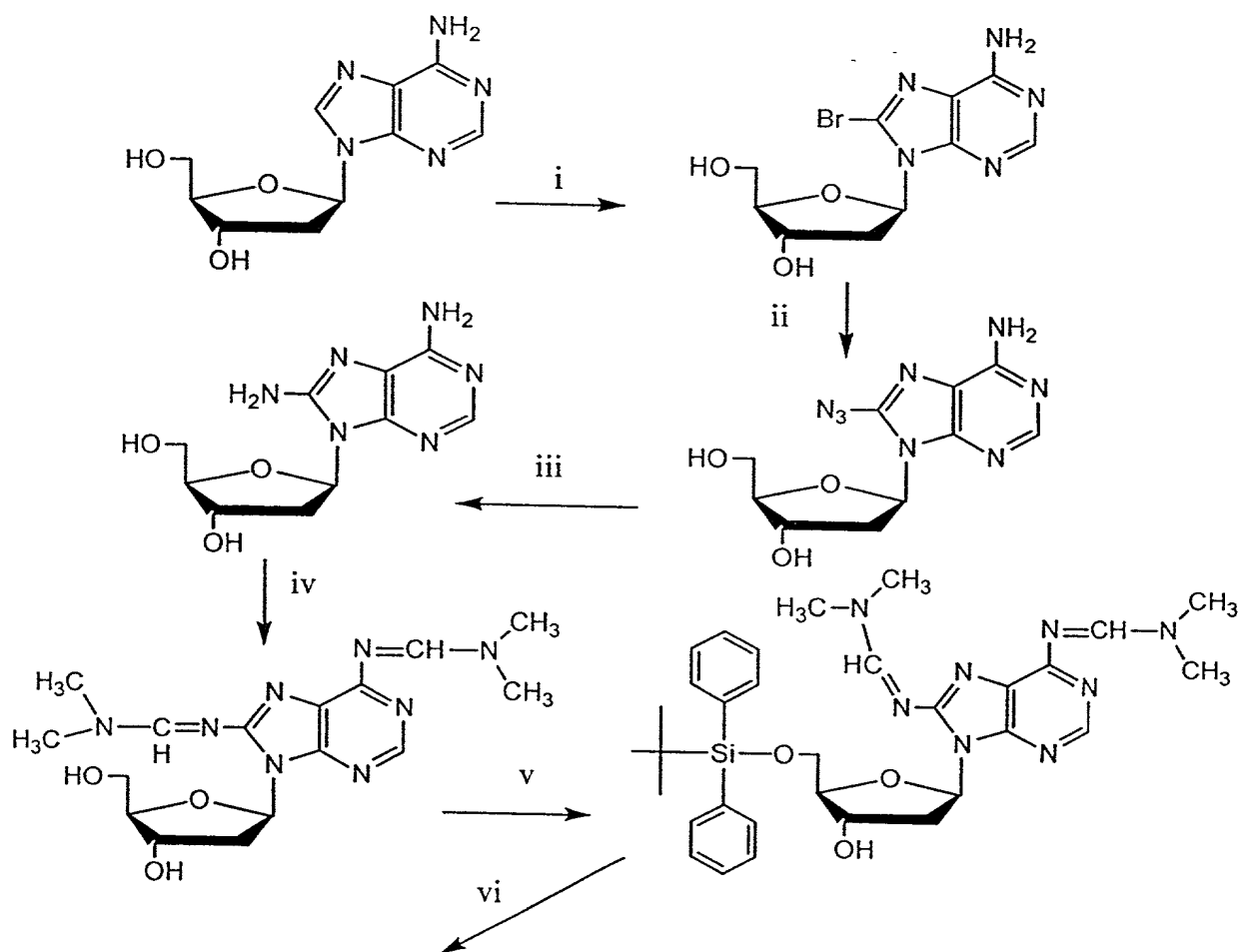


Figure 17A

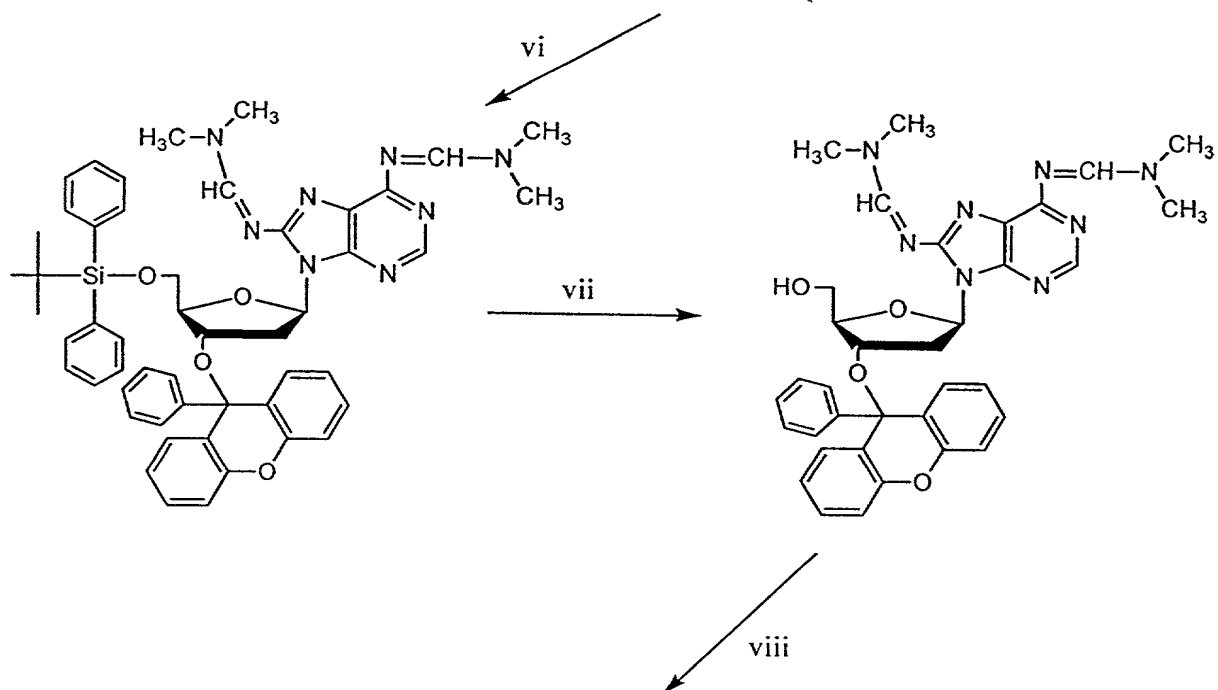


Figure 17B

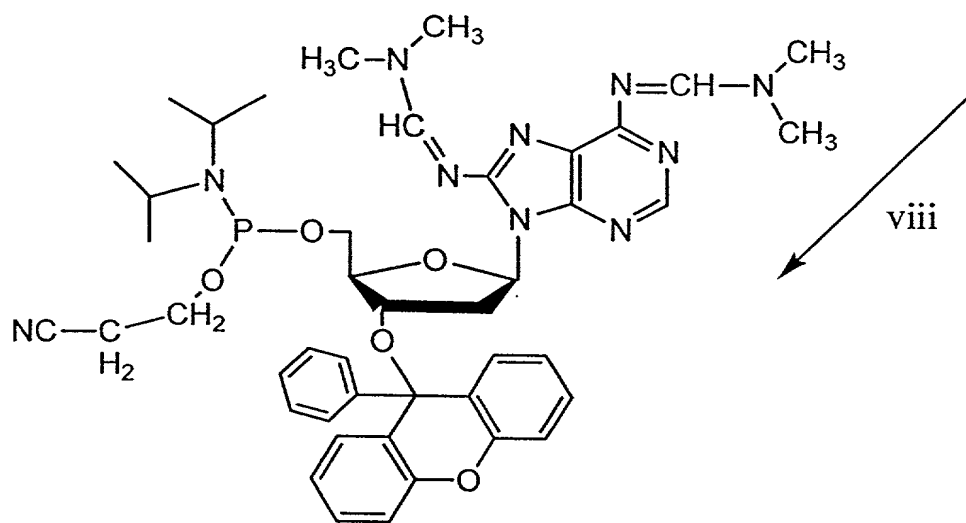


Figure 17C



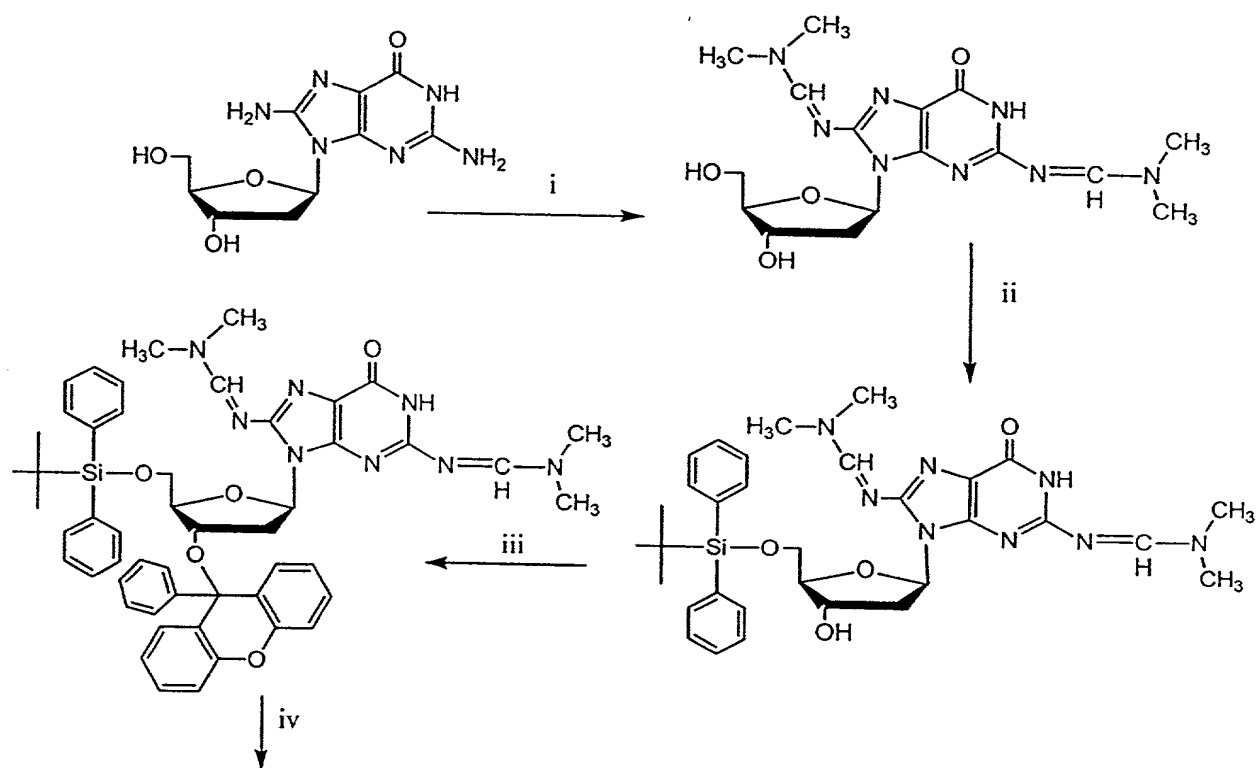


Figure 18A

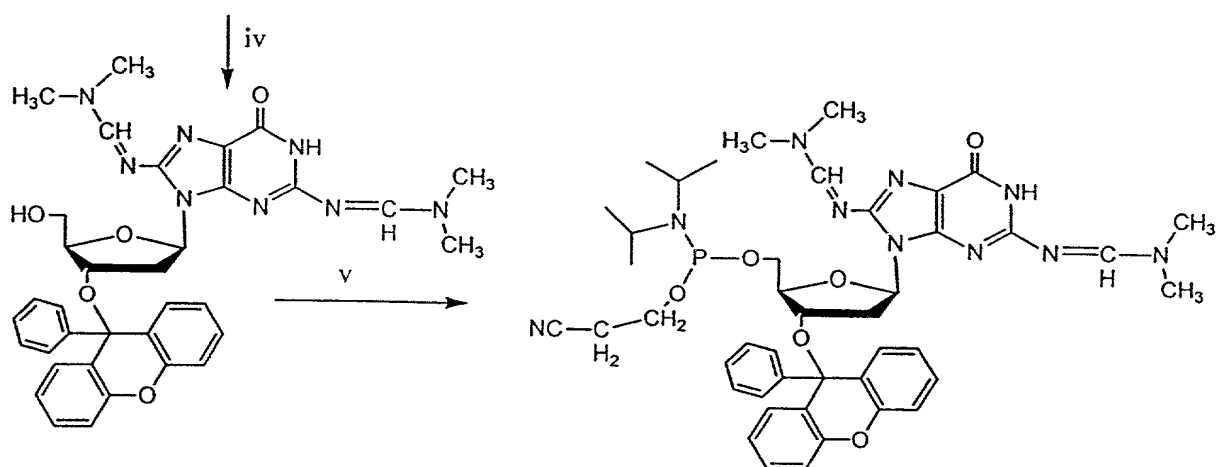


Figure 18B

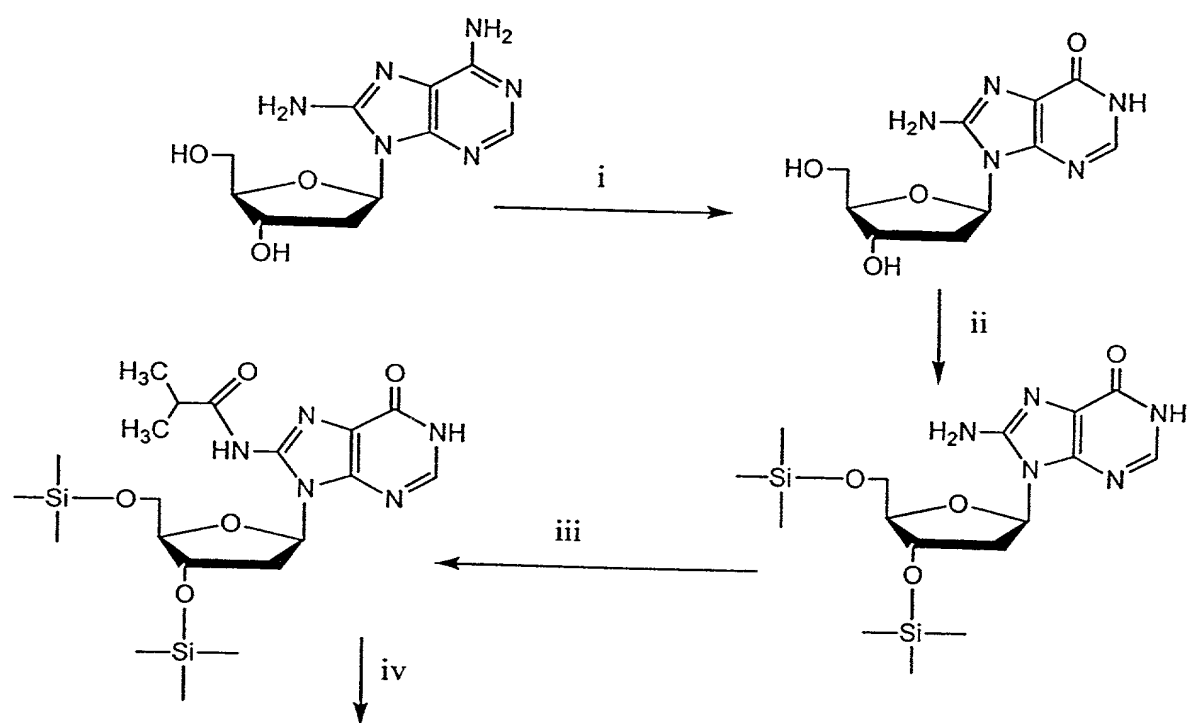


Figure 19A

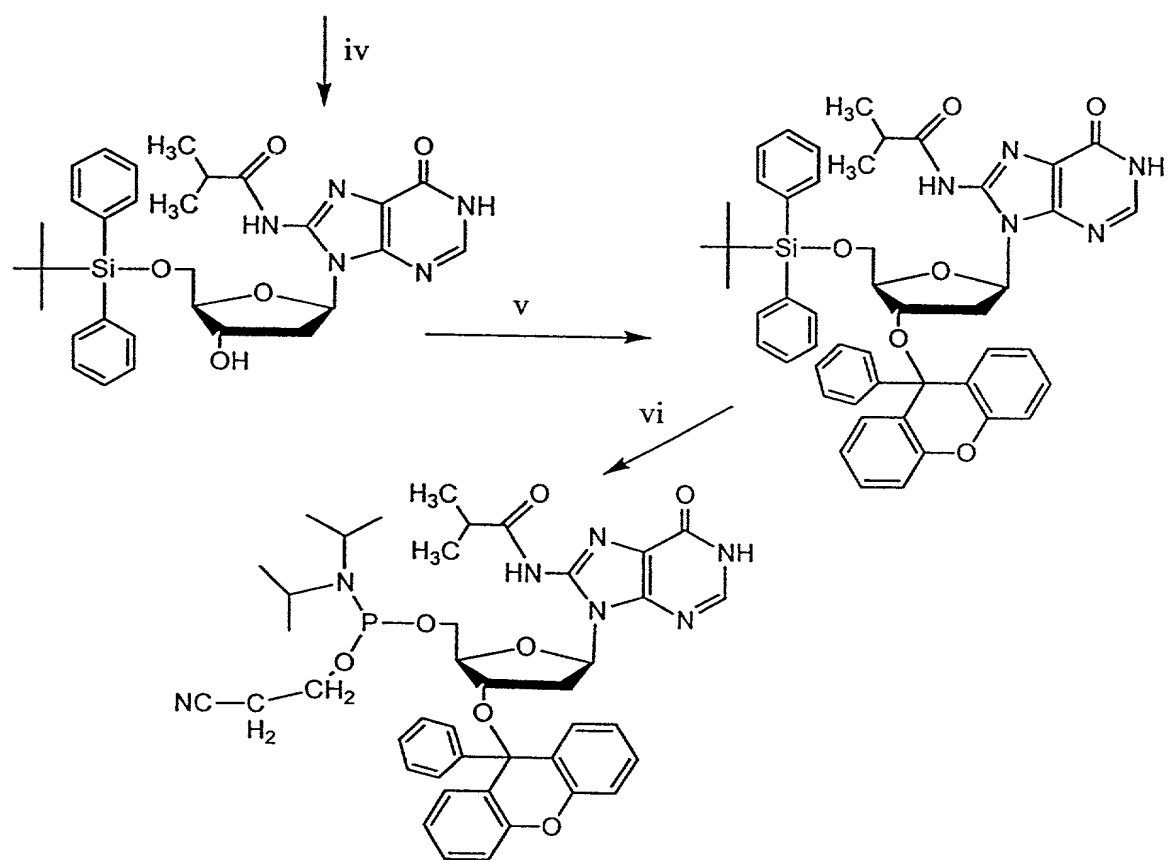


Figure 19B

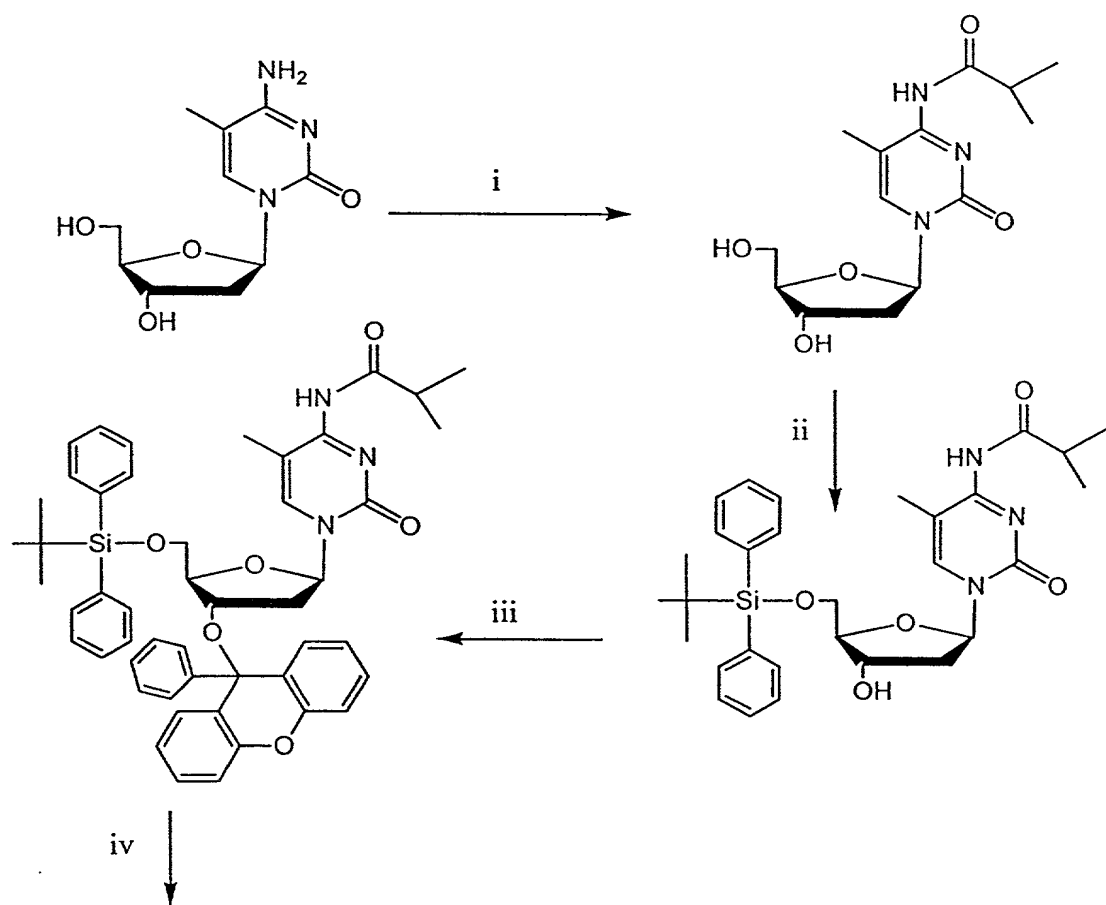


Figure 20A

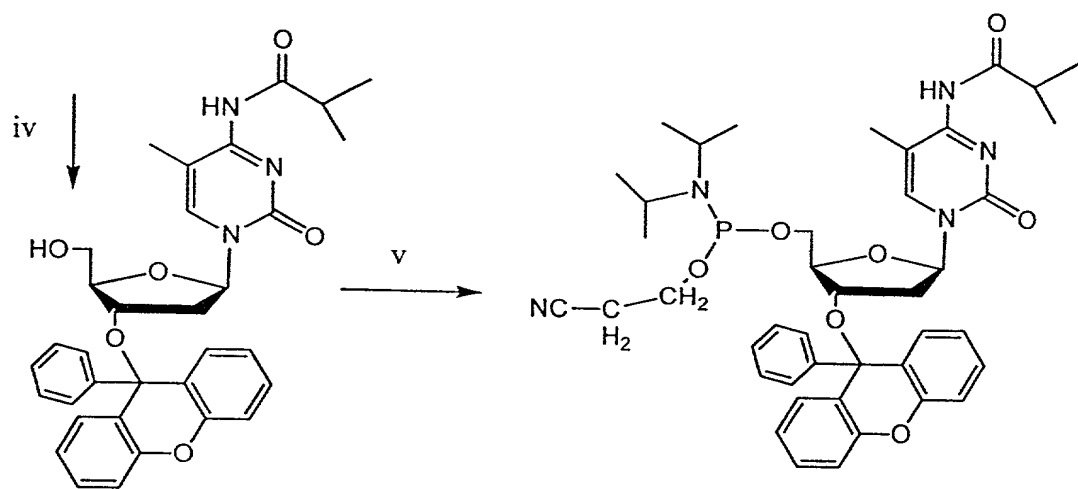
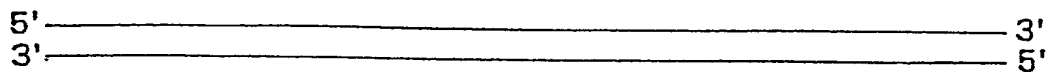
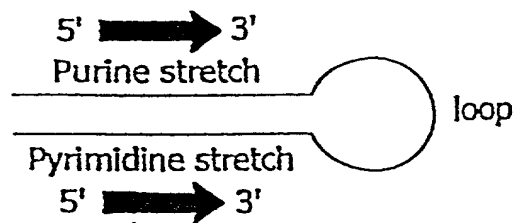


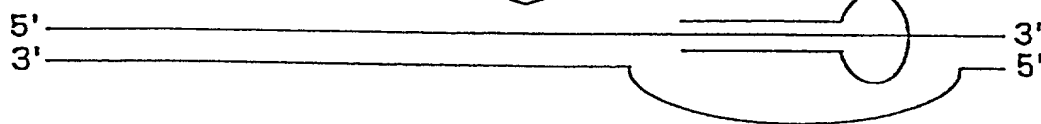
Figure 20B



Starting Template



Add 1st hairpin TFO



Add 2nd hairpin TFO

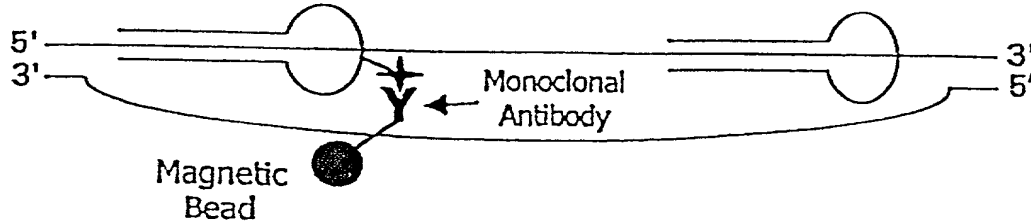
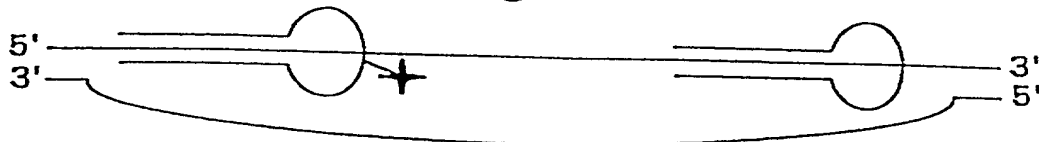


FIGURE 21A

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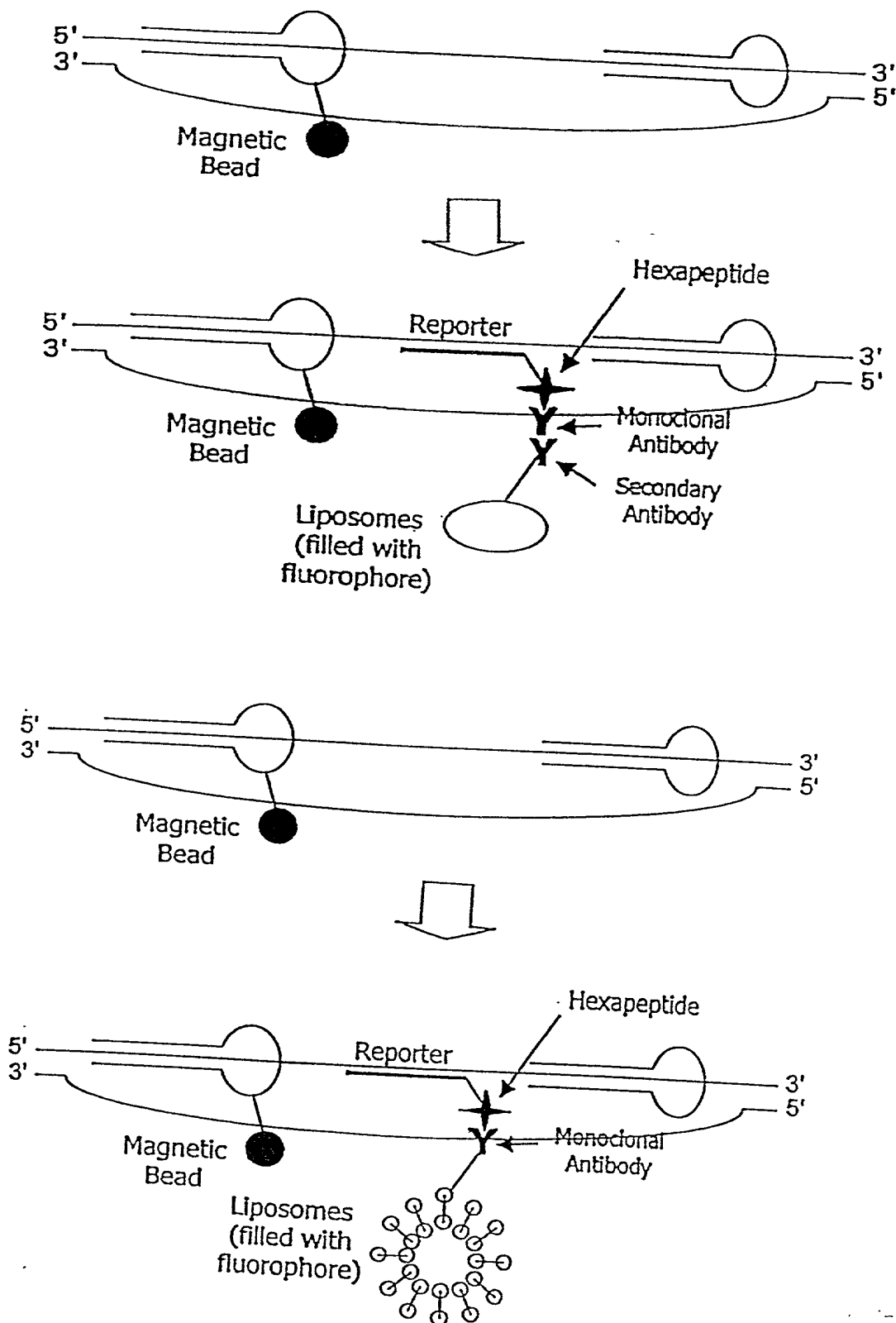


FIGURE 21B



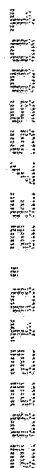
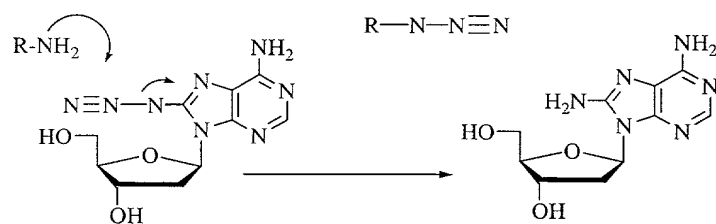
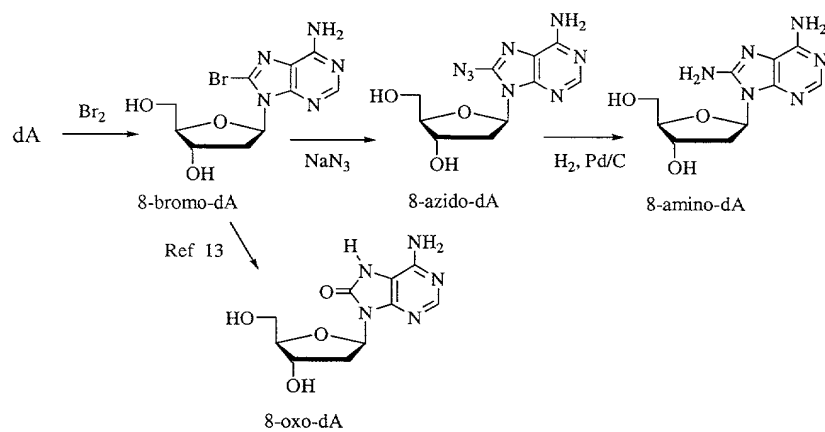

$$\text{RR}'\text{-NH}_2 = 40\% (\text{CH}_3)_2\text{NH}, 1\text{M aq. piperidine}$$

FIGURE 22



**FIGURE 23**



(dA is defined as 2'deoxyadenosine.)

**FIGURE 24**

# SOLID SUPPORT PREPARATION

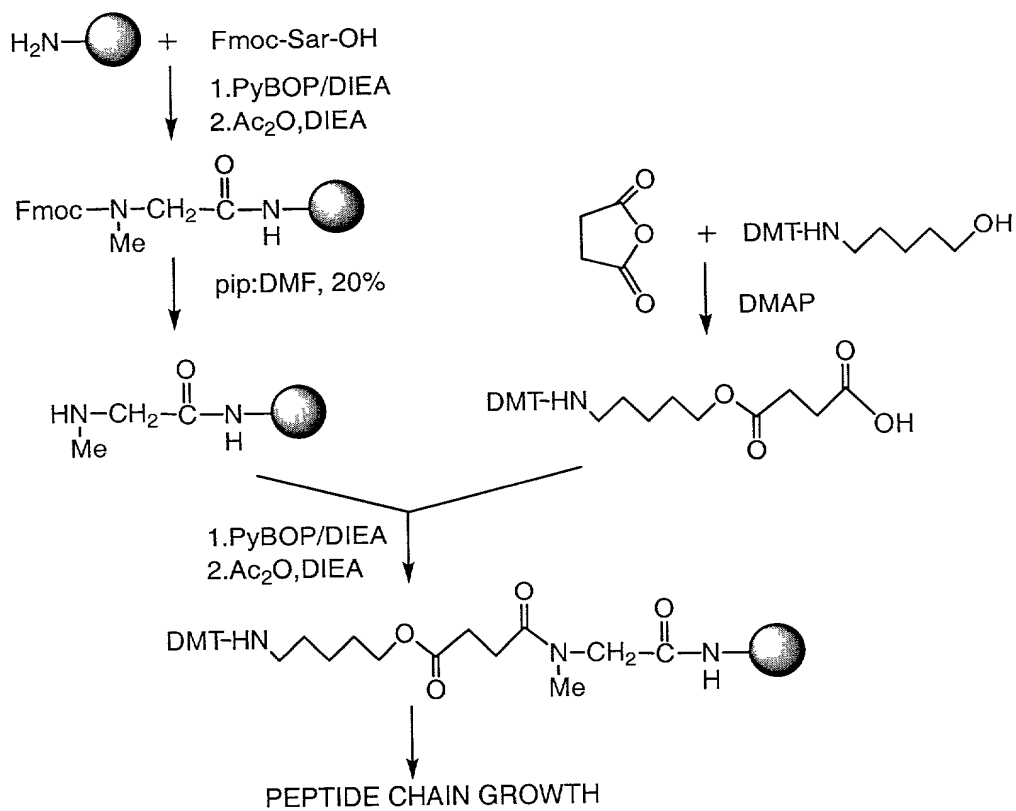


FIGURE 25

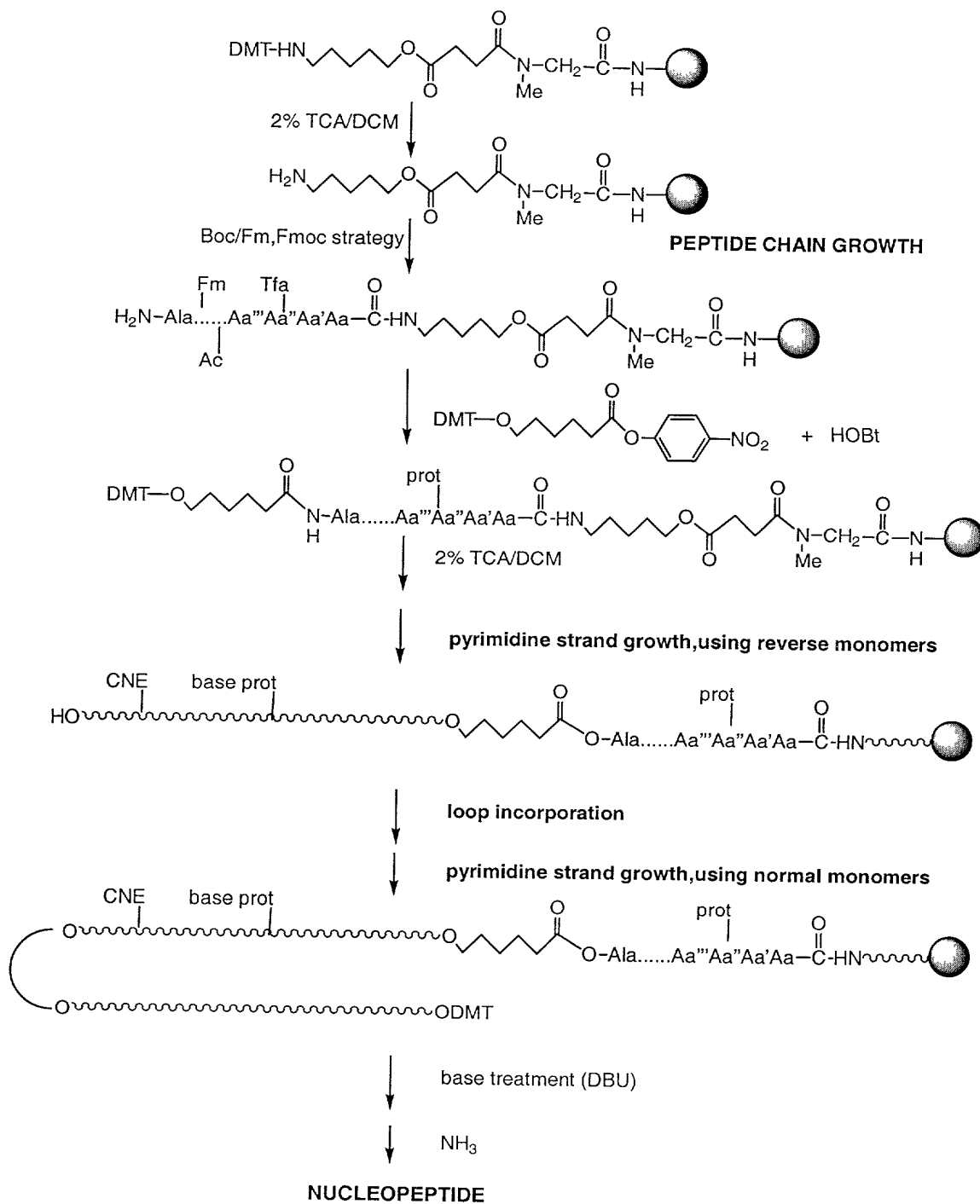


FIGURE 26

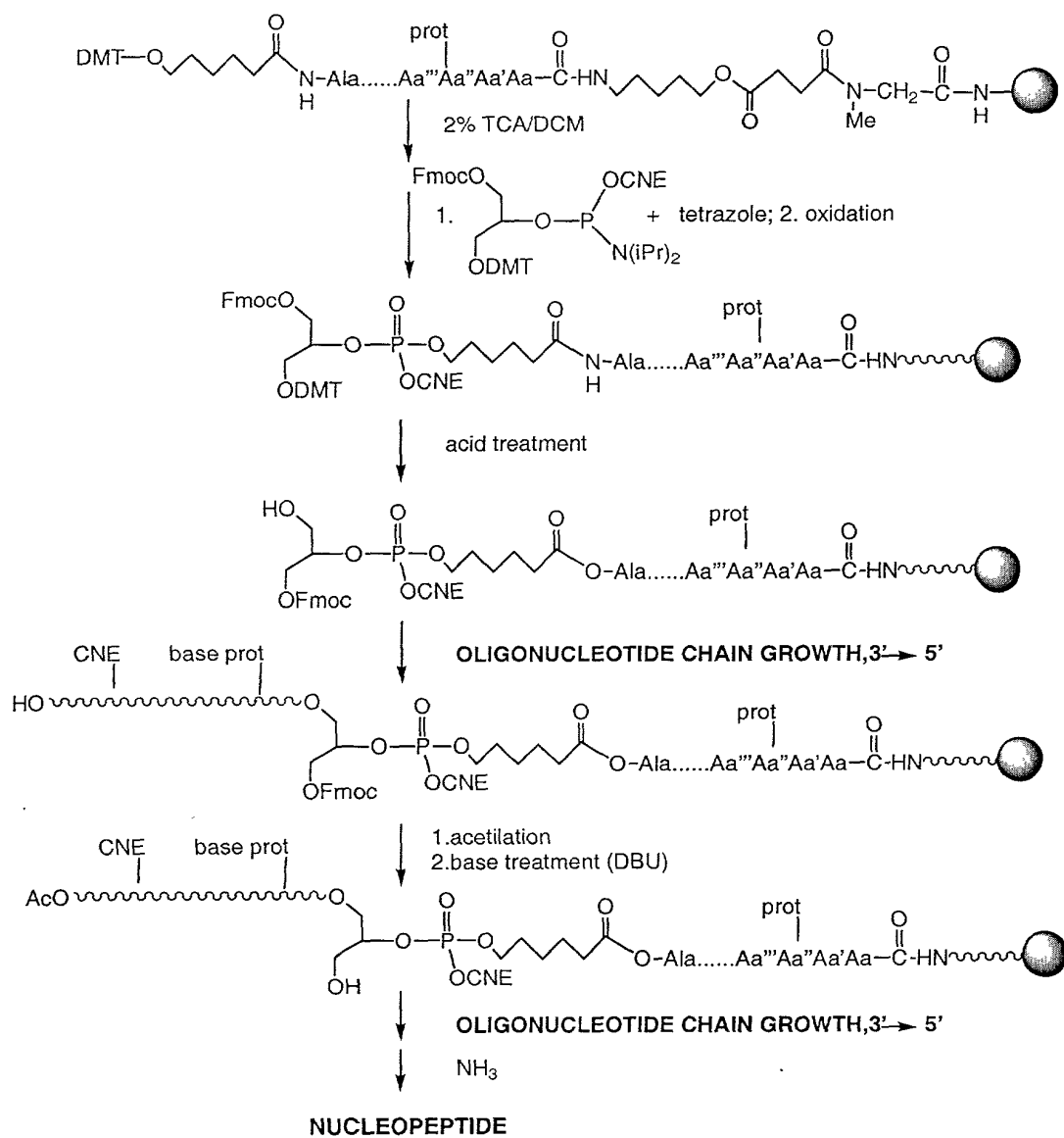


FIGURE 27